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SYNOPSIS

GROUP CHECK DETECTORS &
CURRENT SOURCES
ELEMENT IDENT

| TERM. MOD | FUNCTION | TERM. | LOC. |
|-----------|----------|----------|------|
| +13 | I | 019, 118 | 282 |
| C517# | | 018 | 282 |
| C527# | | 010 | 202 |
| C537# | | 111 | 282 |
| C547# | | 111 | 2F2 |
| C557# | | 012 | 2F3 |
| C567# | | 112 | 202 |
| C577# | | 112 | 282 |
| C587# | | 013 | 202 |
| C61 | # | 204 | 2C4 |
| C62 | | 303 | 204 |
| C63 | | 202 | 2E4 |
| C64 | | 203 | 2E4 |
| C65 | | 2F4 | 203 |
| C66 | | 203 | 2F4 |
| C67 | | 201 | 264 |
| C68 | | 301 | 264 |
| C69 | | 117 | 2C4 |
| C70 | | 017 | 204 |
| C53 | | 016 | 2E4 |
| C54 | | 016 | 2E4 |
| C55 | | 015 | 2F4 |
| C56 | | 015 | 2F4 |
| C57 | | 114 | 264 |
| C58 | | 014 | 264 |
| L63A | # | 205 | 264 |
| L63B | # | 205 | 264 |
| L63C | # | 000 | 284 |
| GRD | G | 319 | 294 |

SYMBOL

| | | |
|-----|-------|--|
| 118 | | |
| 013 | 18V | |
| 018 | CS17B | |
| 020 | CS27B | |
| 110 | CS37B | |
| 111 | CS47B | |
| 012 | CS57B | |
| 112 | CS67B | |
| 013 | CS77B | |
| 113 | CS87B | |

FC219

GROUP CHECK

DETECTOR &

CURRENT SOURCES

A

RECORD OF CHANGES

[illegible]

NOTES

1. GROUND RETURN
 2. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
VALUES PRECEDED BY THE SYMBOL "+(PLUS)
OR -(MINUS) ARE IN VOLTS.
 3. BATTERY AND GROUND TERMINALS FOR THIS
CIRCUIT PACK ARE AS FOLLOWS:
- | FUNCTION | TERMINAL |
|----------|----------|
| +5 | 000 |
| +18 | 019 |
| +18 | 118 |
| GRD | 319 |
4. CURRENT DRAIN:
5V @ 10 mA
18V @ 520 mA
 5. CLOSEST RECOMMENDED HORIZONTAL
MOUNTING CENTERS IS 0.500 INCH.

| IC CODE | GRD TERM. | BAT TERM. |
|---------|--------------|--------------|
| 502R | X | X |
| | | |
| | | |
| | | |
| | | |
| | | |

| SYSTEM USED ON | DESIGN CONTROL |
|-------------------|-------------------|
| NO. 2 ESS | IH |
| NO. 3 ESS | IH |

| DATE | TIME | LOCATION | DATE | TIME | LOCATION |
|------|------|----------|------|------|----------|
| 1 | — | 2-25-75 | AS | HRH | LEG |
| 2A | — | 9-17-75 | LR | HRH | LEG |
| 3A | — | 4-6-76 | LR | HRH | LEG |

SHEET INDEX NOTES

1. A CHANGE ON NEW SHEET WILL BE ASSIGNED THE SAME ISSUE NUMBER AS SHEET 1.
2. THE ISSUE NUMBER OF SHEET 1 IS RECOGNIZED AS THE ISSUE NUMBER OF THE WHOLE DRAWING.

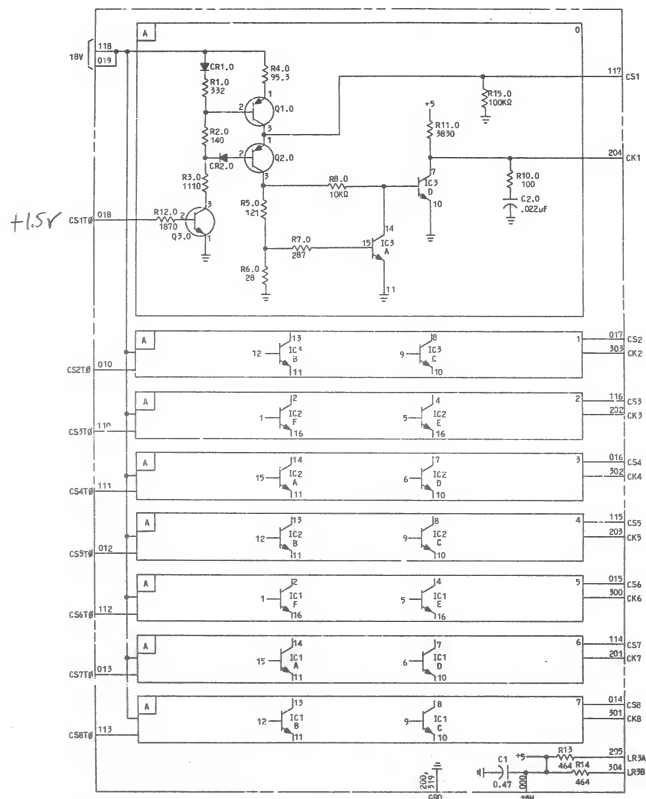
SUPPORTING INFORMATION

| CATEGORY | NO. |
|--------------------------|---------|
| CONNECTOR ON FRAME | 947A,C. |
| CIRCUIT PACK INFORMATION | |
| ACCEPTABLE SERIES NUMBER | 6 |

NOTICE- NOT FOR USE OR DISCLOSURE OUTSIDE THE BENEFIT SYSTEM EXCEPT UNDER WRITTEN AGREEMENT.

| | | |
|--|-------------|----------------------------------|
| <p>FC219 CIRCUIT PACK</p> <p>GROUP CHECK DETECTORS AND CURRENT SOURCES CIRCUIT</p> | <p>1799</p> | <p>ATAC STANDARD</p> |
| <p>BELL TELEPHONE LABORATORIES</p> | <p>(2)</p> | <p>CPS-FC219</p> <p>3 SHEETS</p> |

GROUP CHECK DETECTORS AND CURRENT SOURCES



COMPONENT LIST

INTEGRATED CIRCUIT (SEE SO-24C01-01-010)

| IC DESIG CODE ID | IC1 502R | IC2 502R | IC3 502R | IC DESIG CODE ID |
|------------------------|-------------|-------------|-------------|------------------------|
| DESIG | SH LOC | DESIG | SH LOC | DESIG |
| A | 01 | 01 | 01 | A |
| B | 02 | 02 | 02 | B |
| C | 03 | 03 | 03 | C |
| D | 04 | 04 | 04 | D |
| E | 05 | 05 | 05 | E |
| F | 06 | 06 | 06 | F |
| G | 07 | 07 | 07 | G |
| H | 08 | 08 | 08 | H |

CAPACITORS

| DESIG | CODE |
|----------------|---|
| C1 | KS-19774 L5, 0.47/KS-20756 L1, D.47/KS-19774 L6, 0.47 |
| [8]C2, 0-C2, 7 | KS-19774 L5, .022 |

DIODE

| DESIG | CODE |
|------------------|------|
| [8]CR1, 0-CR1, 7 | 4580 |
| [8]CR2, 0-CR2, 7 | 4580 |

RESISTOR

| DESIG | CODE |
|------------------|--------------------|
| [8]R1, 0-R1, 7 | 297A, 332 |
| [8]R2, 0-R2, 7 | 297A, 140 |
| [8]R3, 0-R3, 7 | 297A, 170 |
| [8]R4, 0-R4, 7 | 297A, 15.3 |
| [8]R5, 0-R5, 7 | 297A, 121 |
| [8]R6, 0-R6, 7 | 297A, 28 |
| [8]R7, 0-R7, 7 | 297A, 287 |
| [8]R8, 0-R8, 7 | 297A, 10,000 |
| [8]R9, 0-R9, 7 | 297A, 100 |
| [8]R10, 0-R10, 7 | 297A, 3980 |
| [8]R11, 0-R11, 7 | 297A, 1870 |
| [8]R12, 0-R12, 7 | 297A, 464 |
| [8]R13, 0-R13, 7 | KS-20209 L1, 100KΩ |

TRANSISTOR

| DESIG | CODE |
|----------------|------|
| [8]Q1, 0-Q1, 7 | 51F |
| [8]Q2, 0-Q2, 7 | 51F |
| [8]Q3, 0-Q3, 7 | 66S |

CIRCUIT DESCRIPTION

FUNCTION

THIS CIRCUIT PACK PROVIDES EIGHT CURRENT SOURCES AND EIGHT CHECK CIRCUITS.

DETAILED DESCRIPTION

THIS CIRCUIT PACK CONTAINS 8 IDENTICAL CIRCUITS. WHEN TX2 CS LEAD IS TERMINATED WITH AN IMPEDANCE BETWEEN 47Ω AND 820 ΩMS, THE CS LEAD WILL BE AT A LEVEL OF 0.9 VOLTS OR LESS. WHEN THE CS LEAD IS TERMINATED WITH AN IMPEDANCE OF LESS THAN 348 ΩMS OR MORE THAN 1200 ΩMS, THE CS LEAD WILL BE AT 14.0 VOLTS ± 10%. THE CS LEAD IS CAPABLE OF SUPPLYING 35 MILLIAMPERES. THE CS LEAD IS CAPABLE OF SINKING AT LEAST 7.5 MILLIAMPERES. CURRENT IS SUPPLIED ONLY WHEN THE INPUT LEAD (CSLTD) IS AT 1.5V OR HIGHER.

LEAD DESIGNATION

| NAME | MEANING |
|------------|--|
| 18V | 18 VOLT SUPPLY TO THE CIRCUIT PACK |
| CS1-CX5 | CURRENT SOURCE CHECK OUTPUT 1 - CURRENT SOURCE CHECK OUTPUT 5 |
| CS1-CS3 | CURRENT SOURCE 1 OUTPUT - CURRENT SOURCE 3 OUTPUT |
| CS10-CS8TD | CURRENT SOURCE 1 TURN ON CURRENT SOURCE 8 TURN ON |

ISSUE
3A

FC219 CIRCUIT PACK

DELL TELEPHONE LABORATORIES

2
6SCPS-FC219
SHEET 3
PRINTED IN U.S.A.